PROJECT DESCRIPTION

GENERAL

THIS PROJECT INVOLVES THE MODIFICATION OF THE EXISTING TRAFFIC CONTROL SIGNAL WITH STREET LIGHTING AND INTERCONNECT AT THE INTERSECTION OF MD 185 (CONNECTICUT AVENUE) AND MD 410 (EAST WEST HIGHWAY) IN MONTGOMERY COUNTY, MARYLAND. MODIFICATIONS INCLUDE THE INSTALLATION OF 16 INCH LED COUNTDOWN PEDESTRIAN SIGNAL HEADS AND AUDIBLE/TACTILE PEDESTRIAN PUSHBUTTONS FOR ALL LEGS OF THE INTERSECTION. MD 185 IS ASSUMED TO RUN IN A NORTH-SOUTH DIRECTION.

INTERSECTION OPERATION

THE INTERSECTION WILL CONTINUE TO OPERATE IN A NEMA EIGHT-PHASE, SEMI-TRAFFIC-ACTUATED MODE WITH THE MD 185 APPROACHES OPERATING CONCURRENTLY AND THE MD 410 APPROACHES OPERATING CONCURRENTLY. EXCLUSIVE LEFT-TURN PHASING IS PROVIDED FOR NORTHBOUND MD 185 AND EASTBOUND AND WESTBOUND MD 410. EXCLUSIVE/PERMISSIVE LEFT-TURN PHASING IS PROVIDED FOR SOUTHBOUND MD 185. A BUS PRE-EMPTION PHASE IS PROVIDED FOR EASTBOUND AND WESTBOUND MD 410 TO PROVIDE GAPS FOR BUSES EXITING LELAND STREET. NEW AUDIBLE PUSHBUTTON ACTUATED PEDESTRIAN PHASES WILL BE PROVIDED ACROSS THE NORTH AND SOUTH LEGS OF MD 185 AND THE EAST AND WEST LEGS OF MD 410. INTERSECTION LIGHTING EXISTS ON THE NORTHEAST, NORTHWEST, AND SOUTHWEST CORNERS OF THE INTERSECTION. INTERCONNECT EXISTS TO THE SOUTH TO THE INTERSECTION OF MD 185 AND LELAND STREET.

NEW AUDIBLE, PUSHBUTTON-ACTUATED, PEDESTRIAN PHASES WILL BE PROVIDED ACROSS THE NORTH AND SOUTH LEGS OF MD 185 AND THE EAST AND WEST LEGS OF MD 410.

APS MESSAGE FOR CROSSING MD 185 (CONNECTICUT AVENUE):

A. WHEN PEDESTRIAN LOCATES AND PRESSES PUSHBUTTON FOR AN EXTENDED TIME, THE PUSHBUTTON UNIT WILL ANNOUNCE "WAIT TO CROSS CONNECTICUT AT EAST WEST, WAIT".

B. WHEN WALK PHASE BEGINS, THE MESSAGE WILL BE A RAPID TICK WHICH WILL LAST FOR THE DURATION OF THE WALK PHASE.

APS MESSAGE FOR CROSSING THE EAST LEG OF MD 410 (EAST WEST HIGHWAY):

A. WHEN PEDESTRIAN LOCATES AND PRESSES PUSHBUTTON FOR AN EXTENDED TIME, THE PUSHBUTTON UNIT WILL ANNOUNCE "WAIT TO CROSS EAST WEST AT CONNECTICUT, WAIT".

B. WHEN WALK PHASE BEGINS, THE MESSAGE WILL BE A RAPID TICK WHICH WILL LAST FOR THE DURATION OF THE WALK PHASE.

APS MESSAGE FOR CROSSING THE WEST LEG OF MD 410 (EAST WEST HIGHWAY):

A. WHEN PEDESTRIAN LOCATES AND PRESSES PUSHBUTTON FOR AN EXTENDED TIME, THE PUSHBUTTON UNIT WILL ANNOUNCE "WAIT TO CROSS EAST WEST AT CONNECTICUT, CROSSWALK ANGLES LEFT, WAIT".

B. WHEN WALK PHASE BEGINS, THE MESSAGE WILL BE A RAPID TICK WHICH WILL LAST FOR THE DURATION OF THE WALK PHASE.

CONTROLLER REQUIREMENTS

THE EXISTING NEMA SIZE '6' BASE MOUNTED CABINET AND EIGHT-PHASE CONTROLLER AND ALL ASSOCIATED EQUIPMENT WILL CONTINUE TO BE USED. A 2-WIRE CENTRAL CONTROL UNIT WILL BE ADDED TO THE CABINET.

EQUIPMENT LIST "A"

A. EQUIPMENT TO BE SUPPLIED BY SHA:

ITEM NO.	QUANTITY	UNIT	DESCRIPTION
900000	40	SF	SHEET ALUMINUM GROUND MOUNTED SIGN
			- 3 EACH OM1-3 (18"x18")
			- 3 EACH W11-2 (36"x36")
			- 3 EACH W16-7pR (24"x12")
900000	8	SF	SHEET ALUMINUM MAST ARM / POLE MOUNTED SIGN
			- 4 EACH R10-3(1) (9"x15") "CONNECTICUT AVENUE" - POLE MOUNTED
			- 4 EACH R10-3(1) (9"x15") "EAST WEST HIGHWAY" - POLE MOUNTED

PROJECT CONTACTS

THE CONTACT PERSONS FOR SHA ARE AS FOLLOWS:

MS. ANYESHA MOOKHERJEE
ASSISTANT DISTRICT ENGINEER - TRAFFIC
PHONE: (301) 513-7404

MR. TOM FOUNTAIN
ASSISTANT DISTRICT ENGINEER - MAINTENANCE
PHONE: (301) 513-7304

MR. ED RODENHIZER
SUPERVISOR - SIGNAL SHOP
PHONE: (410) 787-7650

MR. VICTOR GRAFTON
DISTRICT UTILITY ENGINEER
PHONE: (301) 513-7350

MS. CORREN JOHNSON
CHIEF - TRAFFIC OPERATIONS DIVISION
PHONE: (410) 787-7630

MR. MIKE STOCKER
SUPPLY OFFICE IV (SIGNAL SHOP WAREHOUSE)
PHONE: (410) 787-7696

MR. EUGENE BAILY
CHIEF - SIGN OPERATIONS SECTION
PHONE: (410) 787-7670

MR. PAUL WILSON
PEPCO
PHONE: (301) 548-4332

THE CONTACT PERSON FOR MCDPWT IS AS FOLLOWS:

MR. KAMUL HAMUD
MONTGOMERY COUNTY DEPARTMENT OF TRANSPORTATION
PHONE: (240) 777-8761

VACANT
MONTGOMERY COUNTY SIGNAL SHOP
PHONE: (301) 279-1291

EQUIPMENT LIST "B"

B. EQUIPMENT TO BE FURNISHED AND/OR INSTALLED BY THE CONTRACTOR

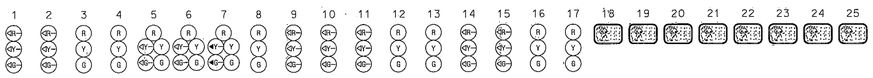
ITEM NO.	QUANTITY	UNIT	DESCRIPTION
100000	1	EA	MAINTENANCE OF TRAFFIC (PER INTERSECTION)
203030	4	CY	TEST PIT EXCAVATION
585621	350	LF	12 INCH WHITE PREFORMED THERMOPLASTIC PAVEMENT MARKING LINES
585625	100	LF	24 INCH WHITE PREFORMED THERMOPLASTIC PAVEMENT MARKING LINES
585700	450	LF	REMOVAL OF EXISTING PAVEMENT MARKING LINES, ANY WIDTH
600000	170	LF	TYPE A COMBINATION CURB AND GUTTER ANY HEIGHT OR DEPTH
600000	170	LF	TYPE A CURB ANY HEIGHT OR DEPTH
655105	1040	SF	5 INCH CONCRETE SIDEWALK
655120	95	SF	DETECTABLE WARNING SURFACE FOR CURB RAMPS
800000	1	EA	2-WIRE APS CENTRAL CONTROL UNIT
800000	8	EA	AUDIBLE/TACTILE PEDESTRIAN PUSHBUTTON STATION AND SIGNS
800000	8	EA	16 INCH LED COUNTDOWN PEDESTRIAN SIGNAL HEAD
800000	7	EA	5 FOOT OR 10 FOOT PEDESTAL POLE WITH BREAKAWAY COUPLINGS, FOUNDATION & GROUND ROD
800000	1	EA	PEDESTAL POLE (ANY SIZE LARGER THAN 10 FOOT) WITH BREAKAWAY TRANSFORMER BASE, FOUNDATION & GROUND ROD
800000	1	EA	REMOVE & DISPOSE OF EXISTING SIGNAL EQUIPMENT (PER SIGNALIZED INTERSECTION LOCATION)
800000	100	LF	UP TO 4 INCH SCHEDULE 80 RIGID PVC CONDUIT - BORED OR SLOTTED
800000	125	LF	UP TO 4 INCH SCHEDULE 80 RIGID PVC CONDUIT-TRENCHED
800000	84	LF	WOOD SIGN SUPPORTS UP TO 4 INCH X 6 INCH
800000	48	SF	INSTALL OVERHEAD OR GROUND MOUNTED SIGN (INCLUDING ALL HARDWARE)
800000	1	EA	THIRD PARTY CONCRETE TESTING (PER INTERSECTION)
802501	200	LF	NO. 6 AWG STRANDED BARE COPPER GROUND WIRE
860284	5	EA	12 INCH LED VEHICULAR TRAFFIC SIGNAL HEAD SECTION
861105	1150	LF	ELECTRICAL CABLE - 2 CONDUCTOR (NO. 14 AWG)
861107	1200	LF	ELECTRICAL CABLE - 5 CONDUCTOR (NO. 14 AWG)
861108	50	LF	ELECTRICAL CABLE - 7 CONDUCTOR (NO. 14 AWG)

EQUIPMENT LIST "C"

C. EQUIPMENT TO BE REMOVED AND RETURNED TO SHA:

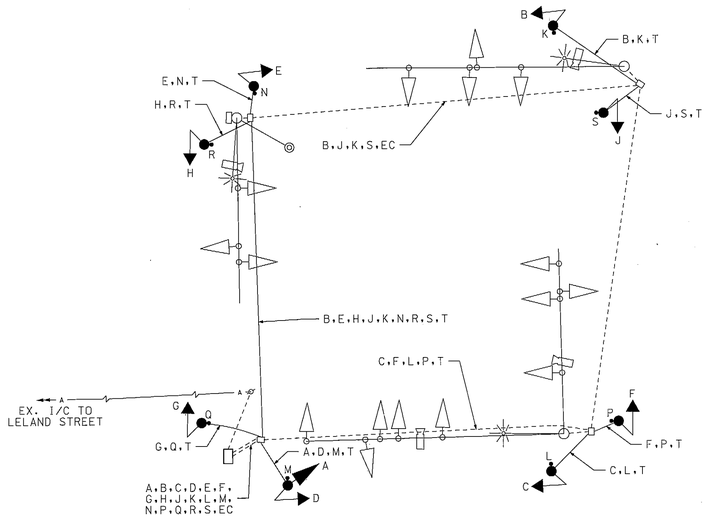
NONE.

PHASE CHART



	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
PHASE 1 + 5	←G—	←G—	R	R	←G-/R	←G-/R	←G-/R	R	←R—	←R—	←R—	R	R	←R—	←R—	R	R	DW	DW	DW	DW	DW	DW	DW	DW
1 + 5 CHANGE	1 + 5 MAY CHANGE TO PHASE 1 + 6, PHASE 2 + 5, OR PHASE 2 + 6																								
PHASE 1 + 6	←G—	←G—	G	G	R	R	R	R	←R—	←R—	←R—	R	R	←R—	←R—	R	R	DW	W	W	DW	DW	DW	DW	DW
1 + 6 CHANGE	←Y—	←Y—	G	G	R	R	R	R	←R—	←R—	←R—	R	R	←R—	←R—	R	R	DW	W	W	DW	DW	DW	DW	DW
PHASE 2 + 5	←R—	←R—	R	R	←G-/G	←G-/G	←G-/G	G	←R—	←R—	←R—	R	R	←R—	←R—	R	R	W	DW	DW	W	DW	DW	DW	DW
5 CHANGE	←R—	←R—	R	R	←Y-/G	←Y-/G	←Y-/G	G	←R—	←R—	←R—	R	R	←R—	←R—	R	R	W	DW	DW	W	DW	DW	DW	DW
PHASE 2 + 6	←R—	←R—	G	G	G	G	G	G	←R—	←R—	←R—	R	R	←R—	←R—	R	R	W	W	W	W	DW	DW	DW	DW
PED CLEARANCE	←R—	←R—	G	G	G	G	G	G	←R—	←R—	←R—	R	R	←R—	←R—	R	R	FL/DW	FL/DW	FL/DW	FL/DW	DW	DW	DW	DW
2 + 6 CHANGE	←R—	←R—	Y	Y	Y	Y	Y	Y	←R—	←R—	←R—	R	R	←R—	←R—	R	R	DW	DW	DW	DW	DW	DW	DW	DW
PHASE 3 + 7	←R—	←R—	R	R	R	R	R	R	←G—	←G—	←G—	R	R	←G—	←G—	R	R	DW	DW	DW	DW	DW	DW	DW	DW
3 + 7 CHANGE	3 + 7 MAY CHANGE TO PHASE 4 + 7, PHASE 3 + 8, OR PHASE 4 + 8																								
PHASE 4 + 7	←R—	←R—	R	R	R	R	R	R	←G—	←G—	←G—	G	G	←R—	←R—	R	R	DW	DW	DW	DW	DW	DW	DW	DW
4 + 7 CHANGE	←R—	←R—	R	R	R	R	R	R	←Y—	←Y—	←Y—	G	G	←R—	←R—	R	R	DW	DW	DW	DW	DW	DW	DW	DW
PHASE 3 + 8	←R—	←R—	R	R	R	R	R	R	←R—	←R—	←R—	R	R	←G—	←G—	G	G	DW	DW	DW	DW	DW	DW	DW	DW
3 CHANGE	←R—	←R—	R	R	R	R	R	R	←R—	←R—	←R—	R	R	←Y—	←Y—	G	G	DW	DW	DW	DW	DW	DW	DW	DW
PHASE 4 + 8	←R—	←R—	R	R	R	R	R	R	←R—	←R—	←R—	G	G	←R—	←R—	G	G	DW	DW	DW	DW	DW	DW	DW	DW
4 + 8 CHANGE	←R—	←R—	R	R	R	R	R	R	←R—	←R—	←R—	Y	Y	←R—	←R—	Y	Y	DW	DW	DW	DW	DW	DW	DW	DW
PHASE 4 + 8 ALT	←R—	←R—	R	R	R	R	R	R	←R—	←R—	←R—	G	G	←R—	←R—	G	G	DW	DW	DW	DW	W	W	W	W
PED CLEARANCE	←R—	←R—	R	R	R	R	R	R	←R—	←R—	←R—	G	G	←R—	←R—	G	G	DW	DW	DW	DW	FL/DW	FL/DW	FL/DW	FL/DW
4 + 8 ALT CHANGE	←R—	←R—	R	R	R	R	R	R	←R—	←R—	←R—	Y	Y	←R—	←R—	Y	Y	DW	DW	DW	DW	DW	DW	DW	DW
BUS PRE-EMPTION	←R—	←R—	R	R	R	R	R	R	←R—	←R—	←R—	G	G	←R—	←R—	G	G	DW	DW	DW	DW	DW	DW	DW	DW
PRE-EMPTION CHANGE	←R—	←R—	R	R	R	R	R	R	←R—	←R—	←R—	Y	Y	←R—	←R—	Y	Y	DW	DW	DW	DW	DW	DW	DW	DW
FLASHING OPERATION	FL/←R	FL/←R	FL/Y	FL/Y	FL/Y	FL/Y	FL/Y	FL/Y	FL/←R	FL/←R	FL/←R	FL/R	FL/R	FL/←R	FL/←R	FL/R	FL/R	DARK	DARK	DARK	DARK	DARK	DARK	DARK	DARK

WIRING DIAGRAM



PROPOSED ELECTRICAL CABLE

A } 7-CONDUCTOR ELECTRICAL CABLE (NO. 14 AWG)

B,C,D,E, F,G,H,J } 5-CONDUCTOR ELECTRICAL CABLE (NO. 14 AWG)

K,L,M,N, P,Q,R,S } 2-CONDUCTOR ELECTRICAL CABLE (NO. 14 AWG)

T } STRANDED BARE COPPER GROUND WIRE (NO. 6 AWG)

EXISTING ELECTRICAL CABLE

EC } EXISTING ELECTRICAL CABLE TO REMAIN

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STATE OF MARYLAND
DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION
OFFICE OF TRAFFIC & SAFETY
TRAFFIC ENGINEERING DESIGN DIVISION

MD 185 (CONNECTICUT AVENUE) AT MD 410 (EAST WEST HIGHWAY)
CHEVY CHASE, MARYLAND

GENERAL INFORMATION SHEET

SCALE NONE DATE AUGUST 9, 2013 CONTRACT NO. XY2385185

DESIGNED BY NJM COUNTY MONTGOMERY
DRAWN BY SPM LOGMILE 15118501.38
CHECKED BY BSH T.I.M.S. NO. M005
F.A.P. NO. T.O.D. NO.

T.S. NO. 4640D-GI SG-03 OF SG-03 SHEET NO. OF

PLOTTED: Friday, August 09, 2013 AT 01:24 PM
FILE: I:\5212 - TEDD\23 (PB 151) - MD 118, MD 185 Signals\Design\Engineering\PlanSet\MD 185 at MD 410 (TS 4640)\pSG-N001_TS4640D.dgn